WHAT IS CLAIMED IS:

1. An isolated nucleic acid selected from the group consisting of:

(a) an isolated nucleic acid encoding an amino acid sequence selected from the group consisting of SEQ ID NO:17-SEQ ID NO:26, SEQ ID NO:35-SEQ ID NO:46, and SEQ ID NO:73-SEQ ID NO:77;

(b) An isolated nucleic acid selected from the group consisting of SEQ ID NO:47-SEQ ID NO:63, SEQ ID NO:67-SEQ ID NO:71, SEQ ID NO:78-SEQ ID NO:99, SEQ ID NO:100-SEQ ID NO:104, and SEQ ID NO:105-SEQ ID NO:109;

(c) an isolated nucleic acid comprising at least 20 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NO:47-SEQ ID NO:63, SEQ ID NO:67-SEQ ID NO:71, SEQ ID NO:78-SEQ ID NO:99, SEQ ID NO:100-SEQ ID NO:104, and SEQ ID NO:105-SEQ ID NO:109;

(d) an isolated nucleic acid comprising a nucleotide sequence that is at least 56% identical to the nucleotide sequence provided in (a), (b), or (c);

(e) an isolated nucleic acid comprising a nucleotide sequence that is complementary to the nucleotide sequence provided in (a), (b), (c), or (d).

2. A vector comprising the isolated nucleic acid provided in Claim 1.

3. A host cell comprising the vector of Claim 2, wherein the host cell is selected from the group consisting of bacterial, yeast, insect, mammalian, and plant cells.

4. A primer comprising the isolated nucleic acid of Claim 1.

5. A probe comprising the isolated nucleic acid of Claim 1.

6. An isolated peptide comprising an amino acid sequence selected from the group consisting of:

(a) an isolated peptide comprising an amino acid sequence selected from the group consisting of: SEQ ID NO:17-SEQ ID NO:26, SEQ ID NO:35-SEQ ID NO:46, and SEQ ID NO:73-SEQ ID NO:77;

(b) an isolated peptide comprising at least 8 contiguous amino acids of an amino acid sequence selected from the group consisting of SEQ ID NO:17-SEQ ID NO:26, SEQ ID NO:35-SEQ ID NO:46, and SEQ ID NO:73-SEQ ID NO:77;

(c) an isolated peptide comprising an amino acid sequence that is at least 84% identical to the amino acid sequence provided in (a), or (b).

7. A polypeptide complex comprising a P2Y-type G-protein coupled receptor, and a peptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:17-SEQ ID NO:26 AND SEQ ID NO:35-SEQ ID NO:46, and SEQ ID NO:73-SEQ ID NO:77.

8. A polypeptide complex comprising a G-protein coupled receptor selected from the group consisting of P2Y10, HGPRBMY3, HGPRBMY11, and HGPRBMY23, and a peptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:17-SEQ ID NO:26, SEQ ID NO:35-SEQ ID NO:46, and SEQ ID NO:73-SEQ ID NO:77.

9. An antibody that binds to the isolated peptide of Claim 6.

10. The antibody according to Claim 9 wherein said antibody is selected from the group consisting of:

(a) a monoclonal antibody;

(b) a polyclonal antibody; and

(c) an anti-idiotype antibody;

(d) an anti-idiotype antibody raised to the monoclonal antibody (a), which binds to a P2Y-type G-protein coupled receptor;

(e) an anti-idiotype antibody raised to the monoclonal antibody of (a), which binds to a G-protein coupled receptor selected from the group consisting of P2Y10, HGPRBMY3, HGPRBMY11, and HGPRBMY23;

(f) an antibody that binds to the polypeptide complex of Claim 7; and

(g) an antibody that binds to the polypeptide complex of Claim 8.

11. A method of isolating a peptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:17-SEQ ID NO:26 SEQ ID NO:35-SEQ ID NO:46, and SEQ ID NO:73-SEQ ID NO:77 comprising the steps of: incubating the antibody of Claim 10 with the peptide, thereby isolating the peptide.

12. A peptide library generated from the isolated nucleic acid of Claim 1.

13. A method of identifying a binding agent for a P2Y-type G-protein coupled receptor comprising: screening the peptide library of Claim 12 for one or more peptides that bind to a G-protein coupled receptor, wherein binding indicates identification of an G-protein coupled receptor-binding agent.

14. A method of identifying a binding agent for a G-protein coupled receptor selected from the group consisting of P2Y10, HGPRBMY3, HGPRBMY11, and HGPRBMY23, comprising: screening the peptide library of Claim 12 for one or more peptides that bind to P2Y10, HGPRBMY3, HGPRBMY11, or HGPRBMY23, wherein binding indicates identification of a binding agent.

15. A method of identifying a P2Y-type G-protein coupled receptor comprising:

(a) incubating a member of the group consisting of: the isolated peptide of Claim 6; and the antibody of Claim 9; with a biological sample under conditions that allow the peptide or antibody to bind to a G-protein coupled receptor in the sample, and thereby form a complex; and

(b) identifying formation of the complex in (a), wherein formation of the complex indicates identification of a G-protein coupled receptor.

16. A method of identifying binding agent for a P2Y-type G-protein coupled receptor comprising:

(a) incubating the isolated polypeptide complex of Claim 7 with a test agent under conditions that allow the test agent to bind to the complex; and

b) screening for disruption of the polypeptide complex, wherein disruption of the complex indicates identification of a binding agent.

17. A method of identifying binding agent for a P2Y-type G-protein coupled receptor comprising:

(a) incubating a G-protein coupled receptor with a test agent;

(b) incubating the receptor and test agent with the isolated peptide of Claim 6; and

(c) screening for formation of a polypeptide complex between the receptor and the isolated peptide, wherein inhibition of formation of the complex indicates identification of a binding agent.

18. A kit for detecting a P2Y-type G-protein coupled receptor comprising:

(a) a member of the group consisting of: the isolated peptide of Claim 6; and the antibody of Claim 9; and

(b) one or more reagents for detecting binding of the receptor and the peptide or antibody.

19. A method of diagnosing a proliferative disorder comprising:

(a) incubating a member of the group consisting of: the isolated peptide of Claim 6, and the antibody of Claim 9; with a biological sample under conditions to allow said peptide or said antibody to associate with a P2Y-type G-protein coupled receptor in the sample; and

(b) measuring levels of said peptide-receptor or said antibody-receptor complex formed in (a), wherein an alteration in these levels compared to standard levels indicates diagnosis of the proliferative disorder.

20. A pharmaceutical composition comprising a member of the group consisting of: the isolated nucleic acid of Claim 1; the isolated vector of Claim 2, the isolated peptide of Claim 6, and the antibody of Claim 9; and a physiologically acceptable carrier, excipient, or diluent.

21. A method of treating a proliferative disorder comprising: administering the pharmaceutical composition of Claim 20 in an amount sufficient to treat the disorder.